

Serial No: 10/660,901
Reply to Office Action of 2/17/2006
Amendment Dated: May 16, 2006
Examiner: Alejandro, Raymond
Group: 1745

Amendments to the Drawings:

The attached sheets of drawings include changes to Figures 1A and 1B.
Applicant has amended Figures 1A and 1B to reflect the designation of Prior Art. This
Amendment does not introduce new matter.

REMARKS/ARGUMENTS:

On page 2 of the Office Action, the Examiner objected to the drawings. Applicant has amended the drawings and believes they are now in good form.

On page 2 of the Office Action, the Examiner objected to the Title of the Application. Applicant has amended the title as shown and believes it is now in good form.

In paragraphs 5-8 of the Office Action, the Examiner objected to the Abstract and specification due to various informalities. Applicant has amended the specification as shown and believes that they are now in good form.

In paragraphs 9-10 of the Office Action, the Examiner rejected claims 16 and 19 due to various informalities. Applicant has amended the claims as shown and believes that they are now in good form.

In paragraphs 11-19 of the Office Action, the Examiner rejected claims 1-20 under 35 USC §112 as being indefinite. Applicant has amended the claims as shown and believes they are now in good form.

In paragraph 21 of the Office Action, the Examiner rejected claims 1-20 under 35 USC §102(b) as being anticipated by Souliac et al. (U.S. 6,399,237).

In view of the claims as now presented and for the reasons discussed below, Applicant believes the claims are not anticipated by Souliac et al.

Souliac et al. relates to a cylindrical high-capacity sealed storage cell having a terminal at one end which is made of aluminum, wherein: the one end includes an aluminum cover adapted to be brought into contact with an external electrical connecting part by a clamping structure which is at least in part under the cover and co-operates with an external assembly mechanism, the clamping structure being made from a material selected from the group consisting of stainless steel, nickel-plated steel, copper, and brass; and the cover of the cell is sealed by a metal sealing cap under the cover.

As understood Souliac et al. relates to a battery having a capacity of 10 Ah or more that is particularly suited for power electrical or hybrid vehicles (Col 1, lines 4-13). The electrode is contacted by a means of a plurality of blades that are connected to a connecting part which itself is in contact with a screw that forms an electrical connector on the outside of the housing (Col 4, lines 5-16). The housing in Souliac et al. is preferably made of aluminum (Col 2, lines 26-32). The blades connecting the electrode to the connecting part require some interior space in the battery, however, in connection with the high capacity battery of Souliac et al. this is not problematic.

In contrast, Applicant's claim 1 recites a compact battery having a capacity of 1 Ah. The claim further recites that the second connection may be tightened mechanically and is formed between the contact connection and the pin and whereas the metallic supporting strip of the electrode element is welded directly to the pin. The goal of providing a battery having a capacity of 1 Ah or less and providing it in as compact as possible is achieved in part by welding the metallic supporting strip of the wound electrode element directly to the pin that is connected to the contact connection on the outer face of the housing. This welding feature is now recited in claim 1.

Recall that Souliac et al. relates to high-capacity batteries and does not suggest providing a direct connection of the type now claimed in Applicant's amended claim 1. Accordingly, Applicant believes that the amended claim 1 and claims 2-15 which depend directly or indirectly from claim 1 are not anticipated by Souliac et al.

Regarding claims 16-20, Applicant respectfully points out that Applicant has amended claim 16 to emphasize that the housing is produced from a plastic that is impermeable to gas. This is an important aspect of this claim because it allows for building the battery in a more compact way. This feature is now focused on in claim 16 and described at paragraph 0012 of Applicant's specification.

In contrast, the Souliac et al. housing is metallic and is made of aluminum (Col 2, lines 26-32). With such an aluminum housing it is necessary to provide insulation in the interior of the battery and in order to prevent short circuits. Again, in connection with

high-capacity batteries of the type shown in Souliac et al., this is typically not problematic. However, it is an object of the present claim 16 to provide a battery that is as compact as possible. As recited in claim 16, the battery has first contact connections fitted to an outer face of the housing and electrically connected to the plurality of pins and a second electrical connection which can be tightened mechanically is formed between the first contact connection and the plurality of pins. Because the housing is made from plastic, as claimed in claim 16, it is impermeable to gas and does not serve as an electrical conductor or a contact connection of the type shown in Souliac et al. Because the housing is insulated itself, additional insulating means inside the battery of the type required by Souliac et al. are not required. This results in a saving of space which in turn allows the battery to be made in a more compact size which is one object of the invention covered by claim 16.

For these reasons, Applicant respectfully submits that amended claim 16, as well as the dependent claims 17-20 which depend either directly or indirectly from claim 16 are not anticipated by Souliac et al.

Applicant has added new claim 21 wherein it is recited that a pin is used as a contact connection as a support for the wound electrode element. Because the mechanical connection between the contact connection and the pin may be mechanically tightened, the pin and, therefore, the electrode supported by the pin may be firmly held onto the housing. At the same time, because an additional support is not required, space is further saved within the housing which, again, facilitates providing a compact battery design. As understood, it is not clear whether and how the support and electrode are attached within the housing of the Souliac et al. reference. Applicant respectfully submits that the cited reference, as understood, does not seem to suggest using a pin to support the electrode as recited in Applicant's claim 21.

For all foregoing reasons, Applicant believes that claim 21 is not anticipated by Souliac et al. and should be allowed.

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The Commissioner is hereby authorized to charge any additional fees under 37 C.F.R. 1.16 and 1.17 which may be required by this paper, or to credit any overpayment, to Deposit Account No. 50-1287. Applicants hereby provide a general request for any extension of time which may be required at any time during the prosecution of the application. The Commissioner is also authorized to charge any fees which have not been previously paid for by check and which are required during the prosecution of this application to Deposit Account No. 50-1287. (Should Deposit Account No. 50-1287 be deficient, please charge any further deficiencies to Deposit Account No. 10-0220).

For all the foregoing reasons, Applicant believes this case is now in condition for allowance. If the Examiner feels that this amendment does not place the case in condition for allowance, then Applicant respectfully request an interview with the Examiner prior to the issuance of any further Office Action.

Applicant invites the Examiner to contact the undersigned via telephone with any questions or comments regarding this case.

Reconsideration and favorable action are respectfully requested.

Respectfully submitted,

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